Study Questions Safety of SUVs

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Kevin P. Casey *Los Angeles Times*

Rollover: *A three-car accident on the 405 Freeway in August 2000 caused a Ford Explorer to flip over. No one was seriously injured. A safety study indicates that SUVs pose a high fatality risk to their own drivers and those of the vehicles they run into.*

Which is safer, a Honda Accord or the nearly one-ton- heavier Ford Expedition? Chances are that the brawny SUV would hold up better in a wreck.

Yet drivers of Accords and Expeditions have about the same risk of suffering a fatal accident, new research shows. And when the risk to other drivers is factored in, the Accord is safer by far.

Or consider the massive Chevrolet Suburban, identified by the research as safest among popular SUVs. But according to the data, drivers of Suburbans and shrimpy Volkswagen Jettas have about the same fatality rates.

The novel study's bottom line: Sport utility vehicles and pickups aren't as protective as many of their owners believe, while they are also uniquely dangerous to everyone else.

The auto industry maintains that SUVs have contributed to a decline in the rate of highway

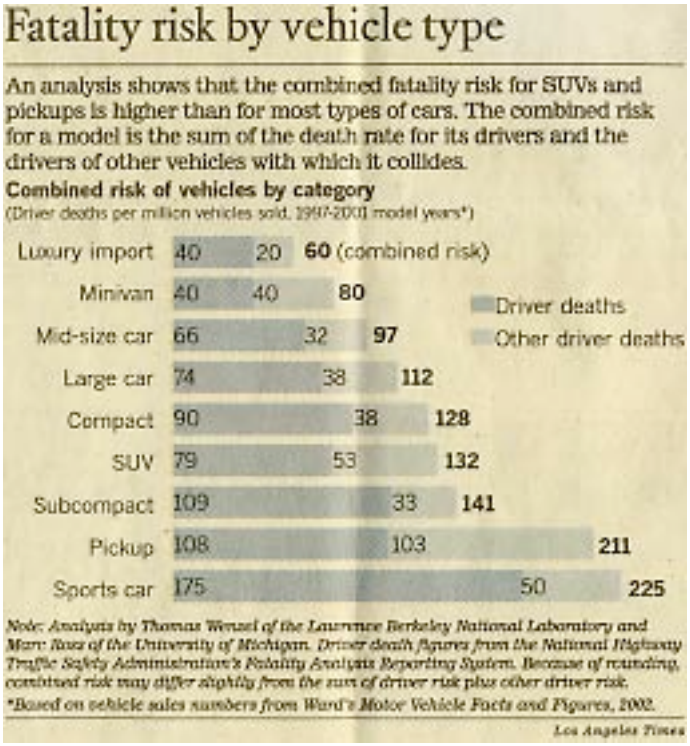
deaths because heavier vehicles are safer for their drivers. "SUVs have an excellent safety record, and they're as safe as cars," said Eron Shosteck of the Alliance of Automobile Manufacturers, a leading industry group.

But Marc Ross of the University of Michigan, co-author of the study with Lawrence Berkeley National Laboratory scientist Thomas Wenzel, contends that a hard look at the data indicates otherwise.

Indeed, the study takes a contrarian jab at an iron maxim of highway safety: that heavy is good and heavier is better.

"We need to ... move away from the idea that bigger and heavier vehicles are automatically safer," said Ross, a physicist. "Quality is a bigger predictor of safety than weight."

Ross and Wenzel's research is believed to be the first to assess fatalities among both drivers of various vehicles and the people they collide with. It comes amid a growing backlash against SUVs and other light trucks, among the most popular yet polarizing of consumer products.



Flying off dealers' lots, light trucks now account for more than half of vehicle sales and are responsible for a steady decline in fuel economy and growing dependence on foreign oil. Many consumers consider the gas-slurping vehicles to be safer than cars. That, in turn, has relieved pressure on automakers to produce more fuel-efficient vehicles.

Riding high behind the wheel of her silver Expedition, Angie Garcia of Sylmar said the SUV looks great and provides a sense of security she would not have in a car. "I definitely feel it's safer ... no questions about it," Garcia said.

Feeling outgunned in a vehicular version of the arms race, other drivers have simply resigned themselves to SUVs.

"I was getting mowed down by the larger SUVs and trucks," said Jennifer Mulcahy of Simi Valley, who dumped her small car in favor of a Nissan Xterra. "It just felt intimidating.... It was survival of the fittest."

Despite such sentiments, Wenzel and Ross say, SUVs and pickups on average provide less protection for their drivers than most large or even mid-size cars.

Associated Press

PILEUP: *The driver of the small Honda at right is checked for injuries after a 25-car accident in Federal Way, Wash. Japanese and European cars were found to be more protective than U.S. cars.*

A primary reason: Unlike cars, which tend to slide sideways when they go out of control, SUVs and pickups, with their high center of gravity, are more likely to flip over. That's important because rollovers are the most lethal accident type, accounting for only about 3% of wrecks but 30% of deaths to vehicle occupants.

Originally published last March, Wenzel and Ross' little-noticed study assigned a "combined risk" number to each vehicle -- defined as the fatality rate for drivers of the model plus the death rate for drivers they crash into. The study used the Fatality Analysis Reporting System, a federal database, to compute death rates for drivers of 1995 through 1999 model-year vehicles. Their research was funded by the Energy Foundation, which includes the Pew Charitable Trusts, the MacArthur Foundation and the Rockefeller Foundation.

At the request of The Times, Wenzel and Ross updated the analysis for model years 1997 to 2001.

Although they did not dispute the numbers, other experts said they may not tell the whole story.

In "all the studies we have done ... weight has a very substantial protective effect," said Priya Prasad, a senior technical fellow for safety at Ford Motor Co. "Heavier is better, especially when you get into two-way accidents."

Wenzel and Ross acknowledged that driver-related factors could account for some differences in risks of various models. For example, if a certain vehicle attracts drivers who tend to wear seat belts, obey speed limits and get into fewer accidents, that car or truck could appear to be safer than it really is.

But they said driver characteristics couldn't account for their most important finding -- that light trucks' reputation for safety is overblown and that their combined risks are greater than those of most cars.

Specifically, their data show that:

- Despite giving up considerable size and weight, most mid-size and large cars are as good as or better than the average SUV at protecting their own drivers, and much more protective of their drivers than the average pickup.

- Particularly dangerous to other motorists in two-vehicle wrecks, SUVs have higher combined risks than mid-size and large cars. Their combined risks are similar to those for compacts and subcompacts.

- The safest compacts and subcompacts -- the Volkswagen Jetta, the Mazda 626, the Subaru Legacy and the Nissan Altima -- have driver death rates as low as or lower than that of the average SUV. Still, compacts and subcompacts have higher driver death rates than SUVs overall. The reason: The most unsafe small cars have extremely high driver fatality rates, two to three times worse than the best cars in the group.

- Minivans, and luxury import cars with their advanced safety features, have lower driver death rates than all other vehicle types. Minivans, like SUVs and pickups, are considered light trucks but are not as top-heavy and therefore are less susceptible to deadly rollovers. Along with design differences, minivans often are used to transport children, perhaps leading people to drive more conservatively.

- Driver death rates for pickups are higher than for all other vehicle types, except for sports cars. The risks are markedly higher than for large and mid-size cars, minivans and SUVs; somewhat higher than for compacts; and similar to those for subcompact cars. Below-average use of seat belts by pickup drivers may be a contributing factor.

- Pickups also are more lethal to other drivers than are SUVs, minivans or any class of cars. Their combined risk is about twice that of large and mid-size cars and about 50% higher than that of SUVs, compacts and subcompacts.

Fatality risk by model

Here is a look at the combined fatality risk for various vehicles by model. The combined risk for a model is the sum of the death rate for its drivers and the drivers of other vehicles with which it collides.

Combined risk of vehicles by model

(Driver deaths per million vehicles sold, 1997-2001 model years*)

Make and model	Vehicle type	Driver deaths	Other driver deaths	Comb. risk
Toyota Avalon	large car	40	20	60
Chrysler Town & Country	minivan	31	36	67
Toyota Camry	mid-size car	41	29	70
Volkswagen Jetta	subcompact	47	23	70
Ford Windstar	minivan	37	35	72
Dodge Caravan	minivan	37	38	75
Nissan Maxima	mid-size car	53	26	79
Honda Accord	mid-size car	54	27	82
Chevrolet Venture	minivan	51	34	85
Buick Century	mid-size car	70	23	93
Subaru Legacy/Outback	compact	74	24	98
Mazda 626	compact	70	29	99
Mercury Sable	mid-size car	75	27	102
Cadillac DeVille	large car	66	39	105
Chevrolet Malibu	mid-size car	71	34	105
Chevrolet Suburban	SUV	46	59	105
Jeep Grand Cherokee	SUV	61	44	106
Honda Civic	subcompact	84	25	109
Pontiac Grand Prix	mid-size	76	33	109
Toyota Corolla	subcompact	81	29	110
Ford Expedition	SUV	55	57	112
GMC Jimmy	SUV	76	39	114
Dodge Intrepid	large car	71	45	116
Ford Taurus	mid-size car	78	39	117
Chevrolet Astrovan	minivan	58	61	118
Nissan Altima	compact	72	49	121
Mercury Marquis	large car	80	43	123
Saturn SC/SL/SW	subcompact	98	26	124
Nissan Sentra	subcompact	95	34	129
Buick LeSabre	large car	96	37	133
Toyota 4Runner	SUV	94	43	137
Chevrolet Tahoe	SUV	68	74	141
Dodge Stratus	mid-size car	103	40	143
Lincoln Town Car	large car	100	47	147
Ford Explorer	SUV	88	60	148
Pontiac Grand Am	compact	118	39	157
Toyota Tacoma	pickup	111	59	171
Chevrolet S-10 Blazer	SUV	122	50	172
Dodge Dakota	pickup	74	110	184
Chevrolet Cavalier	subcompact	146	41	186
GMC C/K	pickup	101	92	193
Jeep Wrangler	SUV	136	58	194
Ford Ranger	pickup	118	78	196
Dodge Neon	subcompact	161	39	199
Pontiac Sunfire	subcompact	158	44	202
Chevrolet C/K	pickup	104	99	203
Chevrolet S-10	pickup	161	55	216
Dodge Ram	pickup	88	137	225
Ford F-Series	pickup	110	128	238

Note: Analysis by Thomas Wenzel of the Lawrence Berkeley National Laboratory and Marc Ross of the University of Michigan. Driver death figures from the National Highway Traffic Safety Administration's Fatality Analysis Reporting System. Because of rounding, combined risk may differ slightly from the sum of driver risk plus other driver risk.

** Based on vehicle sales numbers from Ward's Motor Vehicle Facts and Figures, 2002.*

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- In all classes of cars, Japanese and European models did better on average than their American counterparts, especially in protecting their own drivers. This was particularly striking among compacts and subcompacts. The six safest models (the Jetta, the Altima, the Legacy, the 626, the Honda Civic and the Toyota Corolla) bear Japanese or European nameplates. By contrast, American cars (the Pontiac Sunfire, the Dodge Neon, the Chevrolet Cavalier, the Pontiac Grand Am) had the highest driver death rates in those categories.

The Ross-Wenzel study has emerged at a time of growing concern about the social costs of SUVs, which have long been attacked as harmful to the environment and U.S. energy goals.

Coining the slogan "What would Jesus drive?" a religious group calling itself the Evangelical Environmental Network launched an ad campaign seeking to shame drivers out of their SUVs. The Detroit Project, spearheaded by columnist Arianna Huffington, has run its own ads linking the gas-guzzling vehicles to the funding of terrorists.

More recently, questions have been raised about the safety of SUVs. For instance, an article in the December issue of the Boston University Law Review brands SUVs as "probably the most dangerous products (other than tobacco and alcohol) in widespread use in the United States."

No expert contends that, all other things being equal, heavier vehicles aren't safer for their passengers than are light ones.

"If you put the same technology and the same design concepts into the small vehicle

and the large vehicle, the large vehicle is going to protect its occupants better," said Adrian Lund, chief operating officer for the Insurance Institute for Highway Safety.

Still, Lund acknowledged, at some point that weight becomes a negative in the total equation -- killing a larger number of other motorists than are saved in the heavier vehicles. According to Lund, this threshold is crossed at roughly 4,000 pounds, a little less than the weight of a Ford Explorer or other small to mid-size SUVs.

With this idea in mind, Wenzel and Ross say, the goal should be to make the biggest models more compatible in size and weight with the rest of the fleet.

Meanwhile, prompting great concern in the auto industry, the chief of the National Highway Traffic Safety Administration also has taken aim at SUVs, saying they pose unacceptable risks to their own passengers as well as to other drivers.

Addressing a gathering of industry executives in Detroit last month, Jeffrey W. Runge said he had appointed a panel of NHTSA officials to consider new safety regulations for SUVs -- though it's clear that it would take years for such rules to be adopted.

Responding to Runge's blast, General Motors Corp. said that SUVs "have contributed to the dramatic decline in the nation's fatality rate over the last decade."

In fact, there have been modest declines in fatality rates -- as measured by deaths per total vehicles and vehicle miles traveled. But the death toll has been stuck at about 42,000 a year -- despite wider use of seat belts, stricter vehicle safety standards and better automotive designs.

One reason for this, experts say, is that safety advances have been partly negated by a growing mismatch in size between light trucks and cars. When light trucks collide with cars, the high-riding vehicles can override bumpers and door sills and strike occupants in the chest or head.

Faced with Runge's threat of new regulations, the Alliance of Automobile Manufacturers said last week in a joint letter with the Insurance Institute for Highway Safety that the organizations would work together to make SUVs safer.

Some manufacturers already have begun taking steps to reduce the danger to cars posed by certain light-truck models.

For example, Ford and GM have lowered bumper heights on some models to reduce the risk of override. And in response to safety and fuel efficiency concerns, manufacturers are increasingly pushing "crossover" models -- smaller, more car-like SUVs that inflict less damage in collisions.

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